

Application No.: Not Yet Assigned

Docket No.: 20793/0204562-US0

AMENDMENTS TO THE CLAIMS

Please cancel claims 1-14 as presented in the underlying International Application No. PCT/EP2004/052519 and add new claims 15-29 as shown in the listing of claims.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-14 (canceled)

Claim 15 (new): A scanning microscope comprising:
 at least one light source configured to generate an illuminating light beam;
 an acousto-optical element configured to spatially split a sub-light beam from the
illuminating light beam and adjust an optical power of the illuminating light beam;
 a beam deflection device configured to scan the illuminating light beam over or through a
sample; and
 a beam guiding device configured to direct the sub-light beam onto the sample.

Claim 16 (new): The scanning microscope as recited in claim 15 wherein the beam guiding
device is configured to direct the sub-light beam onto the sample so as to manipulate the sample.

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Claim 17 (new): The scanning microscope as recited in claim 15 wherein the acousto-optical element includes an acousto-optical tunable filter.

Claim 18 (new): The scanning microscope as recited in claim 15 further comprising a further beam deflection device configured to scan the sub-light beam over or through the sample.

Claim 19 (new): The scanning microscope as recited in claim 15 further comprising an objective lens configured to focus the illuminating light beam onto the sample.

Claim 20 (new): The scanning microscope as recited in claim 19 wherein the objective lens is configured to focus the sub-light beam onto the sample.

Claim 21 (new): The scanning microscope as recited in claim 19 further comprising a further objective lens configured to focus the sub-light beam onto the sample.

Claim 22 (new): The scanning microscope as recited in claim 15 wherein the beam guiding device includes an optical waveguide.

Claim 23 (new): The scanning microscope as recited in claim 15 wherein the sub-light beam has a specific polarization property.

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Claim 24 (new): The scanning microscope as recited in claim 23 further comprising a polarization control device disposed between the at least one light source and the acousto-optical element.

Claim 25 (new): The scanning microscope as recited in claim 24 wherein the polarization control device includes a $\lambda/2$ plate.

Claim 26 (new): The scanning microscope as recited in claim 15 further comprising a dispersion compensation device configured to compensate for spatial spectral dispersion, caused by the acousto-optical element, of at least one of the sub-light beam and the illuminating light beam.

Claim 27 (new): The scanning microscope as recited in claim 26 wherein the dispersion compensation device includes at least one of a prism, a grating and a further acousto-optical element.

Claim 28 (new): The scanning microscope as recited in claim 15 wherein the acousto-optical element is configured to direct, to a detector, detection light emanating from the sample.

Claim 29 (new): The scanning microscope as recited in claim 15 further comprising an excitation pinhole configured to support confocal scanning microscopy.